

Patent claims

1. A cordless thread control device for the selective control of an oscillating movement of a thread (2) transversely to its running direction, in particular of a warp thread (2) of a shedding device of a weaving machine, with at least one lifting device (22, 70) capable of being driven in oscillation, with at least one driver (4, 44, 68) having a guide (18) for the thread (2), furthermore with at least one detaining device (28, 60) having a control means (30, 46) actuable by means of an actuator (34, 48), in order to bring the driver (4, 44, 68) selectively into engagement with the lifting device (22, 70), the driver (4, 44, 68) having a damper (40, 40a), characterized in that the driver (4, 44, 68) is designed to be bend-resistant in the longitudinal direction, the driver being divided between the lifting device (22, 70) and the control means (30, 46), and the driver parts (4a, 4b, 44a, 44b, 68a, 68b) being connected to one another via an elastic damper member (40, 42) and/or the driver (68) being capable of being coupled contactlessly to the lifting device (70) via an electromagnetic field, acting as a damper (40a), of an electromagnetic coupling device (66).

2. The thread control device as claimed in claim 1, characterized in that the damper (40) is designed as a stop (26) for the lifting device (22).

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3. The thread control device as claimed in claim 1, characterized in that the coupling device (66) has a permanent magnet (72) which is arranged fixedly on the driver (68) and the pole of which is held suspended between two homopolar poles of a magnetic device (74) which are arranged on the lifting device (70), in such a way that the driver (68) can be driven as long as said driver (68) is not detained by the control means.

(46).

4. The thread control device as claimed in claim 3, characterized in that the poles of the permanent magnet (72, 74) are oriented in the direction of movement of the driver (68).

5. The thread control device as claimed in claim 3, characterized in that the poles of the permanent magnet are oriented transversely to the direction of movement of the driver.

6. The thread control device as claimed in claim 3, characterized in that magnetic device (72) of the lifting device (70) is of permanent-magnetic design.

7. The thread control device as claimed in claim 3, characterized in that the magnetic device of the lifting device is of electromagnetic design.

8. The thread control device as claimed in one of claims 1 to 7, characterized in that, as seen in the weft direction (76) and/or warp direction of the shedding device, the detaining device has the same division (TS and/or TK) as the drivers (44) guiding the warp threads (2).

9. The thread control device as claimed in one of claims 1 to 8, characterized in that the driver (44) is designed as a flat lifter, one end part (54) of which is designed as a control means (46) which can be brought into engagement with a detaining member (58) under the influence of an electromagnetic actuator (48).

10. The thread control device as claimed in claim 9, characterized in that the actuator (48) is designed as an oblique-pole magnet.

11. The thread control device as claimed in claim 9, characterized in that the end part (54) of the driver is designed as a leaf spring.

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12. The thread control device as claimed in claim 9, characterized in that the end part (54) of the driver (68) is provided with a locking recess (56) which cooperates with the detaining part (58).

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13. The thread control device as claimed in one of claims 1 to 12, characterized in that the driver (4, 44, 68) cooperates with a return spring (20) which is arranged on the end part which faces away from the control means (30).

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